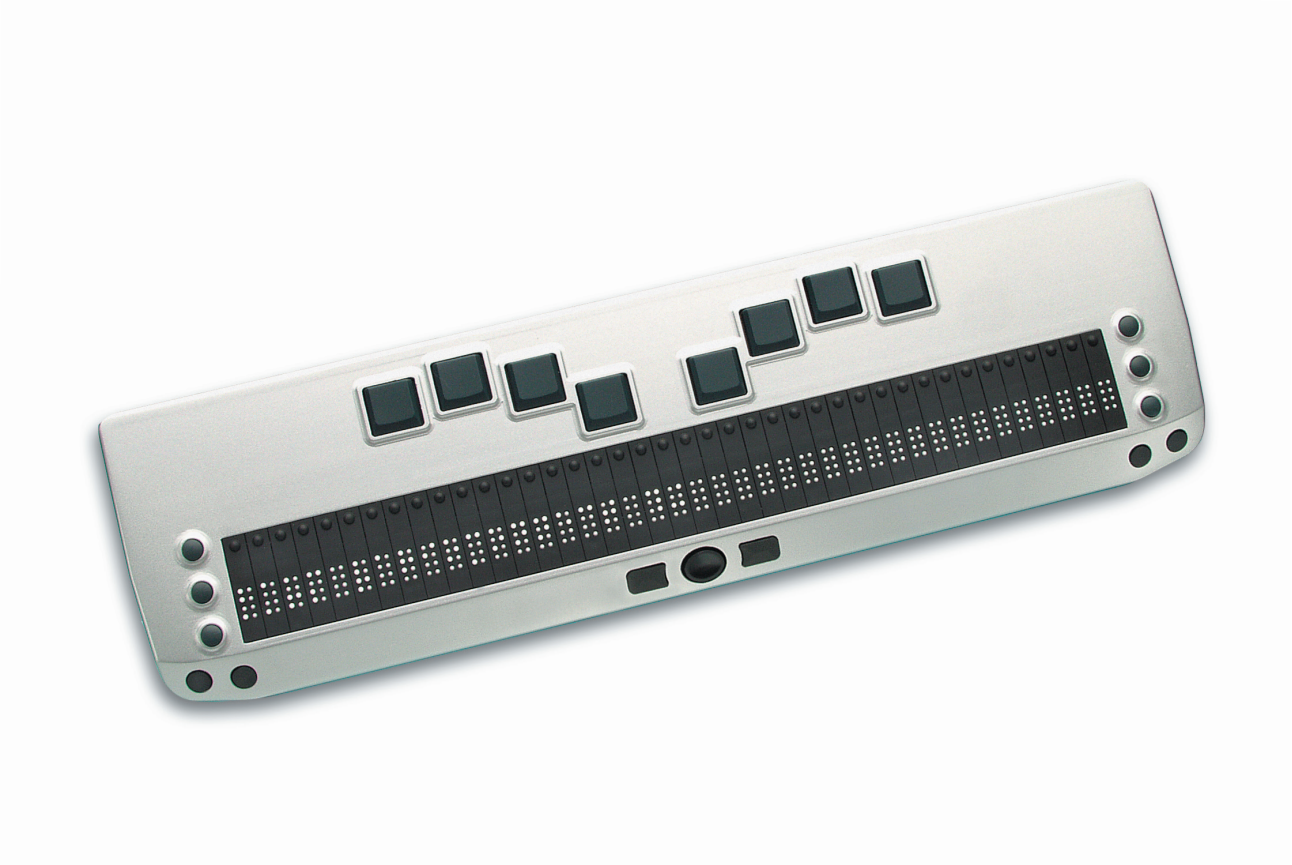
VarioConnect
24/32/40



User Manual

Version 1.0

VarioConnect 24/32/40

User Manual

V1.0en

(c) 2006 Copyright by BAUM Retec AG
In der Au 22, D-69257 Wiesenbach
Tel: +49 6223 / 4909-0 Fax: +49 6223 / 4909-99
e-mail: info@baum.de

All rights reserved. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or information recording and retrieval systems, for any purpose, without the express written permission of Baum Retec AG.

Table of Contents

1 Introduction: VarioConnect 24/32/40 3
2 About this manual 4
3 Description of the device 5
3.1 Keys and operators 5
3.2 Power on/off, Reset 6
3.3 Mains adapter and battery 6
4 The VarioConnect System Menu 8
4.1 The basic System Menu. 9
4.1.1 First line: name of the Braille display 9
4.1.2 Second line: Status 9
4.1.3 Third line: serial number 9
4.1.4 Forth line: Battery status 1
4.1.5 Fifth line: Bluetooth name 9
4.1.6 Sixth line: Quit Menu 10
4.2 The advanced System Menu 10
4.2.1 Fifth line: Protocol 10
4.2.2 Sixth line: Communication channel 11
4.2.3 Seventh line: Auto power off 11
4.2.4 Eighth line, Auto Power off time 11
4.2.5 Nineth line : USB charge on/off 11
4.2.6 Tenth line: Vibration 12
4.2.7 Eleventh Line: Sound 1
4.2.8 Twelveth line: Bluetooth name 12
4.2.9 Thirteenth line: Restore factory settings. 12
4.2.10 Eleventh line: Quit menu and save settings 13
4.3 Self-test 13
4.4 Firmware updates 13
5 Installation and Interface Ports 15
5.1.1 USB Port 15
5.1.2 Bluetooth Interface 16
5.2 VarioConnect with mobile phone 16
5.2.1 TALKS 16
5.2.2 Mobile Speak 17
5.3 VarioConnect with PDAs 17
5.3.1 Mobile Speak Pocket 17
5.3.2 Pocket HAL 17
5.4 Connecting to a PC or Notebook 18
5.4.1 VIRGO 18
5.4.2 Blindows 18
5.4.3 JAWS 19
5.4.4 Windows Eyes 19
5.4.5 Other Screenreaders 19
6 Help with malfunctions 20
7 Technical details 21
7.1 VarioConnect 21
8 Key assignements 22
8.1 Virgo 4 22
8.2 Other Protocols 23
8.2.1 Handy-Tech (HT) 23
8.2.2 Power Braille (PB) 23
9 Contact details 24

1 Introduction: VarioConnect 24/32/40

Congratulations on buying your new mobile Braille display VarioConnect. You have just acquired one of the latest Braille displays which offer a new dimension in functionality, flexibility and portability. VarioConnect is an ideal Braille display and Braille keyboard for mobile devices like notebooks, mobile phones and PDAs. VarioConnect supports all common screenreaders like VIRGO, Blindows, JAWS, Mobile Speak, Mobile Speak Pocket, Talks etc.

VarioConnect is a new Braille display available with 24, 32 or 40 Braille cells. It provides Cursor Routing keys for each Braille cell, 6 Navigation keys and an 8 Dot Braille keyboard. Furthermore there is a joystick and four function keys.

VarioConnect connects to your mobile device via USB or wireless Bluetooth interface. Leave your mobile device in your pocket while you control its full functionality with VarioConnects function keys and joystick.

Outstanding battery life time of about 30 hours on Bluetooth or even 100 hours on USB allow total freedom and mobility.

The universal power supply and battery charger that comes with VarioConnect allows fully charging the device in less than 2.5 hours. Alternatively you can charge VarioConnect via USB.

The highly robust casing is made from light metal. Such techniques are found in modern camera bodies and are already used in Pronto. They allow us to construct very elegant, stable and robust equipment.

VarioConnect is a new milestone in the development of mobile equipment for blind users. Their outstanding feature is the combination of the most up-to-date technology with a tried-and-tested simple design.

2 About this manual

The next chapter contains a description of the device and its power supply and how to switch it on and off. Then follows general information and the System Menu settings.

The following chapter describes the installation process and gives details on how to connect VarioConnect to various devices.

Then follows description of specialties under various screen readers.
The screen reader determines which functions are assigned to the Braille keys, and thus how VarioConnect works with such applications.

The last chapter contains hints and tips to help sort out minor errors yourself.

At the end of the manual you will find details of our branches and our Hotline number which you are welcome to ring with questions and suggestions.

We hope you enjoy working with your new Braille display.

Baum Retec AG.

3 Description of the device

3.1 Keys and operators

At the rear left side of the case, you will find a round socket for the 5 Volt DC power supply. **Use the power supply that comes with VarioConnect only!**

Right to the power supply socket, also on the lift side of the device, there is the Mini USB socket.It is a small square socket which connects to standard MINI USB plugs. VarioConnect can be charged via USB.

The convex Power button is located just to the right of the USB socket, at the left side of VarioConnect. To turn the device on or off, press and hold this button for approximately 3 seconds. VarioConnect will beep when switched on or off.

On the front are the Braille cells. Depending on the model you have, there are 24, 32 or 40 Braille cells. Behind each Braille cell there is a cursor routing key.

On both the left and right of the Braille cells are three small round keys, known as Display keys. On the left they are numbered D1 to D3 from top to bottom, and on the right D4 to D6 from top to bottom (cf the numbering of the Braille dots) and can be pressed individually or in combinations.

Functionality of keys depends on the screen reader (VIRGO, Blindows, JAWS, Talks, Mobile Speak etc.)

On the front edge there are more operators. On both the left and right front edge there are two round function keys. From left to right F1 and F2 to the left and F3 and F4 to the right.

In the middle of the front edge there is the joystick which can be moved in four directions up, down, left and right. It can also be pressed down.

To the left of the joystick there is one more key B9 and to the right B0. B9 and B0 are often used as space bars for the Braille keyboard.

The functions of the operators vary according to the screen reader used.

Behind the Braille cells you will find the 8 Dot Braille keyboard. The keys are located ergonomically, so that your fingers will rest in a comfortable position on dots 1 to 8.

Bluetooth, being a wireless connection, has no plug. The antenna is integrated into the device, there is nothing visible or tangible.

Please fully charge your Braille display before the first use. A full charge lasts about 2.5 hours.

3.2 Power on/off, Reset

The power button is located at the left side of VarioConnect. It is a small convex button, right to the Power and USB sockets.

Holding the power button for aprox. 3 seconds will turn on/off the device.
A beep will anounce that it is switched on (or off).

When holding the power button for aprox. 10 seconds the device will reset.

If no action on the device (no communication with the PC and no user action on the buttons) the device will turn off after the “auto-power-off” period expired. This counter/period will reset every time when data is received from the PC or a user action occurs.

If the device is turned on, and the USB port is selected and the cable is plugged out or the PC is turned off the device will also turn off after the auto-power-off period expired.

If the device is turned off and the USB cable is plugged in the device will wake up. If the battery is low and the charging by USB is enabled the charging will start.

Connecting the AC adapter to the device will also wake up the device and “Charging…” will be displayed.

3.3 Mains adapter and battery

VarioConnect has a built in rechargeable Lithium Ion battery. Please charge the device with the power supply that comes with it. You can also charge the battery via USB.

Thanks to our unique battery management technology, VarioConnect is ready for 30 hours of continuous operation on Bluetooth or even 100 hours on USB.

For charging the battery insert the adapter’s small plug into the left hand socket on VarioConnect and then plug the adapter into a mains outlet. Please use only the original mains adapter.

VarioConnect beeps when connected to power. While charging the Braille display shows “charging” and “charge done” when the battery is fully charged.

After about 2.5 hours VarioConnect is fully charged. You can use VarioConnect while charging. You can inform yourself about the battery status in the system menu.

If your VarioConnect is operated via USB, you can also charge the batteries through this USB cable, so you do not need to connect the power supply and your battery will always stay fully charged. If you have a notebook with a very weak battery instead, you can disabale this function in the system menu thus saving a little bit of battery power on the notebook. VarioConnect will then live from ist own battery until this battery is almost down. Then the USB charge function will be switched on temporarily. This guarantees that you will be able to use the Braille display as long as the notebook will run.

We recommend you fully charge the battery before first use of VarioConnect.

VarioConnects battery management includes a battery protection circuitry that prevents it from being damaged by total discharge. If the battery is low, VarioConnect will warn you by beeping (If sounds are on in the system menu) before it will switch off automatically. If you cannot charge the battery now, you should be prepared for the device automatically switching off in a few minutes.

Please never try to replace the battery yourself. This will likely damage the device and warranty will be lost. In case of repair please address your local dealer or BAUM Retec AG.

4 The VarioConnect System Menu

As soon as VarioConnect is switched on the first lines of the System Menu appear on the Braille cells. This menu contains information relating to the Braille display. This information includes device name, serial number, battery status etc. If necessary, the settings can be changed on the advanced System Menu. The settings you can change include interfaces, protocols, sounds and auto power off timer.

Usually you will pay no attention to the System Menu, as it disappears as soon as data are transferred from your mobile device to the Braille display.

The basic System Menu consists of six lines giving the name of the device, status, its serial number, battery status and Bluetooth name.

It will often prove necessary to install special settings or values, which must be done on the advanced System Menu which can be accessed directly with its own key combination.

The lines in the System Menu can be accessed upwards with D1 (top left), and downwards with D3 (bottom left). Whenever the System Menu is called up the first line will be displayed. Items can be selected in the advanced System Menu by pressing one of the cursor routing keys above the display. The active or selected item is indicated with Braille dots 7 and 8.

The lines of the System Menu will be described below.

To quit the advanced menu, browse through to the “Menu off” option and press a cursor routing key over the word “off”; this is done automatically as soon as data has been exchanged between the PC and the Braille display.

All settings are automatically saved when quitting the System Menu and remain active until next amended.

After you left the system menu, you may want to re-enter it. This can be accomplished by turning the device off and on again or even simpler by double clicking the power button.

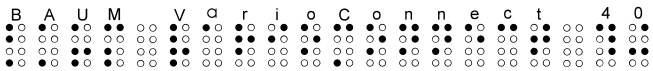
4.1 The basic System Menu.

NB: If reading this document as an RTF file on the PC, the BlackBrl.ttf font must be installed from the accompanying installation CD so that the Braille version of the menu can be seen, otherwise only cryptic symbols will appear. As each line is also written in text, this is not strictly necessary.

4.1.1 First line: name of the Braille display

This is the first entry in the System Menu. It displays the name of the Braille display. Depending on the model:

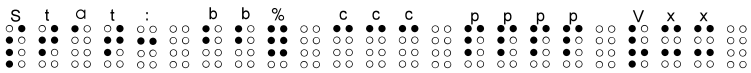
BAUM VarioConnect 40
BAUM VarioConnect 32
BAUM VarioConnect 24



4.1.2 Second line: Status

This line shows battery status (charging percentage), active communication channel, protocol and version number of firmware.

Stat: bb% ccc pppp Vxxx

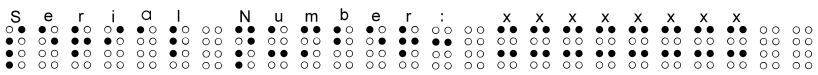


bb = charging percentage.
ccc=active communication channel (USB or Bluetooth)
ppp= protocol
Vxx = Firmware-Version

4.1.3 Third line: serial number

This shows the serial number of the Braille display

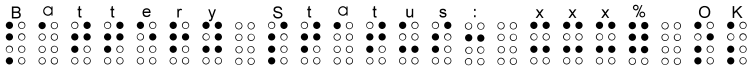
SN: xxxxxxxx.



4.1.4 Forth line: Battery status

This line shows the current charging percentage of the built in battery followed by OK or LOW if the battery is almost down and charging is strongly recommended. VarioConnect can be used while charging the battery.

Battery Status: xxx% OK.

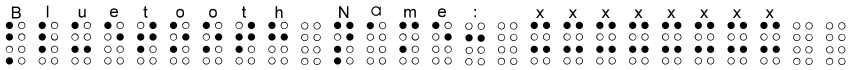


4.1.5 Fifth line: Bluetooth name

This line shows the Bluetooth name which is used to identify VarioConnect on mobile

devices.

Bluetooth Name: xxxxxxxx.

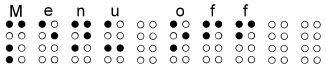


NB: The Bluetooth PIN is „1234“

4.1.6 Sixth line: Quit Menu

Press one of the position keys above the word “off” to quit the menu

Menu off



4.2 The advanced System Menu

The additional options in the advanced system menu allow you to optimise the set-up of your Braille display. You can change the power off timer settings, sound, interface and protocol, or restore the factory settings.

All settings are saved as soon as you quit the System Menu.

All current and selected settings are indicated by Braille dots 7 and 8 underneath the relevant value. To select, simply press one of the cursor routing keys above the relevant value.

Open the advanced System Menu by first pressing **both outer cursor routing keys**, and **then both upper display keys** (on VarioConnect 40 P1, P40, D1, D4). Hold all four keys for at least 5 seconds or until the device beeps.

The menu will open at the first entry “BAUM VarioConnect 40”; use D1 and D3 to browse through the menu options.

The first four lines in the advanced menu are identical to the basic menu (device name, status, serial number, battery status).

4.2.1 Fifth line: Protocol

This option is not available in the first firmware version.

If you want to use VarioConnect with screenreaders where no driver is availbale, you can setup VarioConnect to use different protocol (emulation). Default ist he „BAUM“ protocol which should be used for VIRGO, Blindows, JAWS and all other Screen Readers, where a driver for VarioConnect is available. The line shows then:

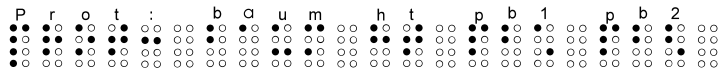
prot: baum ht pb1 pb2

"baum" ist marked with dots 7,8.

You can select a protocol by pressing a cursor routing key above ist name. Then this protocol will be marked with dots 7,8.

Abbreviation "ht" stands for Handy-Tech and "pb" stands for Powerbraille.
The difference between pb1 and pb2 is handling of the keys. Pb2 allows all combinations of keys which can be assigned in a screenreader whereas this assignement is limited in pb1.

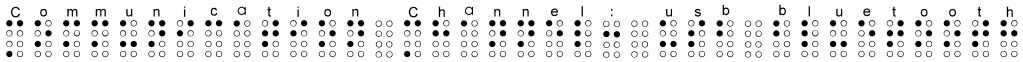
Please only use one of these protocol if there is no driver for VarioConnect available. Otherwise use BAUM protocol and the appropriate driver.



4.2.2 Sixth line: Communication channel

This line selects if VarioConnect communicates via USB or wireless Bluetooth.

Communication Channel: usb bluetooth



4.2.3 Seventh line: Auto power off

In this line, you can decide whether VarioConnect shall automatically switch off after a certain time of inactivity. Inactivity means no data is transferred and no key is pressed. (APO Time = Auto Power Off Time)

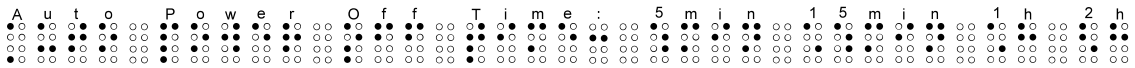
Auto Power Off Time on off

Select ON or OFF by pressing a cursor routing key behind the word.

4.2.4 Eighth line, Auto Power off time

Set the length of time after which the Braille display will power off automatically, when no more data are to be transferred and no keys pressed. Press the cursor routing key above the appropriate value. This line is only visible if Auto Power Off is switched on in the line above.

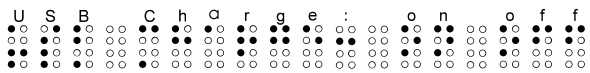
Auto Power Off Time: 5min 15min 1h 2h



4.2.5 Nineth line : USB charge on/off

Here charging the batteries via USB can be switched on or off.

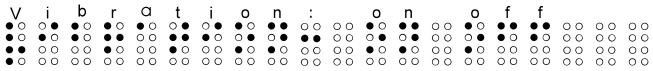
USB Charge: on off



4.2.6 Tenth line: Vibration

On an incoming call, or alarm, VarioConnect can vibrate. Switch this feature on or off here by pressing a cursor routing above the word “on” or “off”.

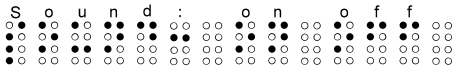
Vibration: on off



4.2.7 Eleventh Line: Sound

This line allows turning of the sounds generated by VarioConnect.

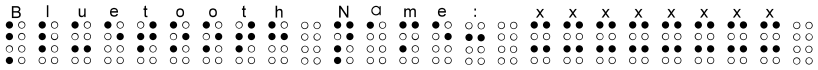
Sound: on off



4.2.8 Twelveth line: Bluetooth name

In this line you can change the the name under which VarioConnect is visible to other devices. Default ist he serial number.

Bluetooth Name: xxxxxxxxx



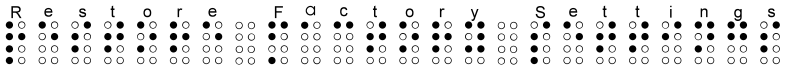
Change the name by pressing a cursor routing key above the character you want to change. The possible positions are in vibrating colons. Under the position selected, dots 7 and 8 vibrate. Use D4 (alphabetical order) or D6 (reverse order) to change the character. Go to the next position with D5 and back with D2 or press the cursor routing key above the position. Once you have changed all position you wanted, save the new name with D1.

NB: The Bluetooth PIN is “1234”.

4.2.9 Thirteenth line: Restore factory settings.

This option allows the Braille display settings to be restored to their status at the time of delivery. Click on one of the cursor routing/position keys above the word RESTORE.

Restore Factory Settings



Factory Settings are:

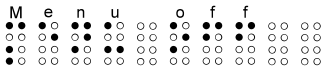
- Communication channel: USB
- Protocol: BAUM
- Auto-power-off: after 15 Minutes
- USB Charge: ON
- Sound: ON

- Bluetooth Name: “BAUM VarioConnect(xxxxxxxx)”,
  xxxxxxxx is the serial number
- Bluetooth Pincode: “1234”
- Bluetooth class: “Display”

4.2.10 Eleventh line: Quit menu and save settings

Press one of the position keys above the word “off”. When quitting the menu all changes will be saved automatically, and the Braille display will resume its normal user status.

Menu off



4.3 Self-test

The Self-test function can only be accessed from the advanced System Menu.
In the System Menu, press the first two and the last two cursor routing keys on the Braille display (VarioConnect 40: P1 P2 P39 P40) simultaneouslyr to launch self-test. The dots of each Braille cell will be activated one after the other and then cleared; the pressed keys will also be displayed. As soon as data have been transferred to the Braille display the Self-test will end and the display will return to normal.

Once Self-test has been launched, dot B1 then B2, B3, B7, B4, B5, B6, B8 etc. will be set on each cell until all 8 dots are set. They will then be cleared one by one until all are cleared. This process is then repeated.

Press and hold the keys as follows:

D1 to set dots B2B5 in the first cell
D2 to set dots B3B6 in the first cell
D3 to set dots B7B8 in the first cell
D4 to set dots B2B5 in the last cell
D5 to set dots B3B6 in the last cell
D6 to set dots B7B8 in the last cell

Pressing a cursor routing key sets B1B4 in the Braille cell underneath.

B-keys, F-Keys and Joystick generate a beam shaped pattern. Thus you can check all keys.

4.4 Firmware updates

So that you can prepare yourself for the future and always acquire the latest VarioConnect developments, it is possible to update the Braille display’s software. All you have to do is to connect the Braille display to the PC (preferabely via USB) and the update program will bring the display up-to-date. This program is so designed that the Braille display can still be used and a new update attempted should an update fail.

During a software update the Braille display beeps every second and a status bar appears on the Braille cells.

If once there is an update available, you can download it together with the installation program from the BAUM homepage www.baum.de

5 Installation and Interface Ports

VarioConnect communicates via its built in wireless Bluetooth interface with mobile phones (Symbian operating system) that run TALKS or Mobile Speak. It can also be used as a Braille display and keyboard for PDAs running Windows CE and the screen readers Mobile Speak Pocket or Pocket HAL (under development). Furthermore, VarioConnect is also supported by PC screen readers like VIRGO, Blindows and JAWS. We recommend Windows XP Service Pack 2 for Bluetooth connections. You can also use USB for connection to Notebook or PC. In that case you can supply power and charge the batteries via USB.

5.1.1 USB Port

Operating system:
- Windows 2000/XP

The widely-used USB port, now present on every PC and Notebook, has almost completely superseded the serial port. The main advantages of USB are its plug-and-play facility and its speed. USB devices may be plugged into, and unplugged from active devices without fear of damage. A live screen reader may not necessarily continue to drive a Braille display, however, without being restarted.

Plug the rectangular USB Connector into your PC. Plug the small Mini USB Plug at the other end of the USB cable into VarioConnects USB port. This is the small rectangular socket on the left side between Power socket and Power switch.

When the Braille display is connected to the PC, the new hardware will be recognised immediately and the PC will search for a driver. Insert the driver CD and let the PC search for the new driver on it. This will then be installed automatically - follow any instructions as appropriate.
The driver installation dialog will appear once again - let the PC search for, and automatically load the appropriate driver again.

NB:
Installation of the two drivers is absolutely essential so that VarioConnect can talk to the PC via the USB port. One of the drivers installs the correct USB access (the virtual COM-port), and the other the Braille display.

During installation you may receive a warning that the driver is not certified by Microsoft - install it anyway.

When VarioConnect has been connected to the USB port and the driver installed from the CD supplied, the Braille display will be contacted as though connected to a serial port; the driver is simulating a so-called virtual serial port. This has the advantage that VarioConnect can be used with screen readers that can only support serial Braille displays.

Installing this driver means that in future one USB port on the computer will be regarded as a serial port, e.g. as COM3. To ascertain which virtual COM-port has been created, go to the Start menu on the PC, select Settings > Control Panel >

System; on the 'Hardware' tab select 'Device manager' and look through the list of ports.

USB ports do not talk to all operating systems. We recommend Windows XP. Windows 2000, Me and 98 support USB, but DOS, Windows 3.11, 95 and NT do not.

5.1.2 Bluetooth Interface

Bluetooth is a wireless connection. Similar to USB, Bluetooth simulates a virtual Com port.

The wireless technology together with long battery life provided by VarioConnect allow total freedom and independence from wires within the range of a Bluetooth connection.

Bluetooth is now a common interface for mobile phones, PDAs and Notebook PCs. PCs can be upgraded with Bluetooth using a so-called Bluetooth USB Dongle which installs automatically on Windows XP Service Pack 2 when plugged in.

At the first time, two Bluetooth devices are connected, they have to be „paired“. This is for security reasons. The devices exchange a PIN code. Later, the devices will recognise each other as friend automatically, if allowed by the user.

In the Bluetooth environment of a PC you will find VarioConnect as:

BAUM VarioConnect (xxxxxxx) where xxxxxxxx ist he serial number.

The Bluetooth PIN which must be sent to the VarioConnect is „1234“.

The Bluetooth device class is „Display“.

The devices are identified by different serial numbers, so you can use as many as you like within the same room.

5.2 VarioConnect with mobile phone

VarioConnect functions as Braille display and Braille Keyboard for Symbian mobile phones running TALKS or Mobile Speak.

5.2.1 TALKS

Symbian Series 60 mobile phones with TALKS version 2.x or 3.x, which support a Braille display, can use our driver TBI (TALKS Braille Interface).

A list of supported phones can be found at the TALKS website:

www.nuance.com/talks

The latest version of TBI can be downloaded from

http://www.baum.de/de/support/downloads.php

this file also includes the TBI installation documentation.

You can of cause buy TALKS and TBI from BAUM directly.

5.2.2 Mobile Speak

Symbian Series 60 mobile phones with Mobile Speak can be used with VarioConnect. The driver comes with Mobile speak.

A list of supported phones can be found at the Mobile Speak website:

www.codefactory.es

you can also buy mobile speak from BAUM directly.

http://www.baum.de/de/produkte/software/mobile_speak.php

Please read the Mobile Speak manual to find out how to connect Mobile Speak and VarioConnect.

5.3 VarioConnect with PDAs

VarioConnect functions as Braille display and keyboard for PDAS running Windows CE. Variants like Pocket PC 2003 or Windows mobile are also supported. Possible Screen Readers are Mobile Speak Pocket and Pocket HAL (under development).

5.3.1 Mobile Speak Pocket

PDAs with Mobile Speak Pocket support VarioConnect. The driver comes with the latest version of Mobile Speak Pocket. Take care to install the appropriate driver for your PDA **and** BAUM Braille devices.

A list of supported PDAs can be found at the Mobile Speak website:

www.codefactory.es

you can also buy mobile speak pocket from BAUM directly.

http://www.baum.de/de/produkte/software/mobile_speak.php

Please read the Mobile Speak Pocket manual to find out how to connect Mobile Speak and VarioConnect.

5.3.2 Pocket HAL

PDAs running Pocket HAL support VarioConnect (coming soon). The driver comes with the latest version of Pocket HAL.

A list of supported PDAs can be found at the Dolphin Pocket HAL website:

www.dolphinuk.co.uk

Please read the Pocket HAL manual to find out how to connect Pocket HAL and VarioConnect.

5.4 Connecting to a PC or Notebook

VarioConnect can be used as Braille display and keyboard with popular PC screen readers like VIRGO, Blindows and JAWS etc. The PC or Notebook must provide either USB or a wireless Bluetooth interface either built in or using a USB Bluetooth dongle. We recommend Windows XP Service Pack 2 as this automatically detects and installs Bluetooth hardware.

How to find out which virtual serial port is provided by a Bluetooth or USB interface:

- Open Control Panel (Start/settings/Control Panel)
- Select “System” from the list
- In the Window now opening, select the tab “Hardware”
- On this tab, click on “device manager”
- In the device managers tree view, open the branch “Ports (Com and LPT)”
- Search for something similar to “standard serial over Bluetooth port (Com 13)”. There may be more of these. Note down the number after the COM.
- This number is the number of the virtual com port, the device is connected to. The screen reader wants to know this port.

Some screen readers do not support higher numbers of Com Ports. In that case you may want to change the port number. Do this by selecting the “Port (Com and LPT)” branch in device manager like we did above and right click on the Port you want to change (Shift F10 will do the same). The context menu opens and you can click on “Properties”. Then click on the tab “Port settings” and click on the “advanced” button. In the Window now opening there is a List Box “Com Port Number” where you can choose a free port number. Numbers not available will be marked.

5.4.1 VIRGO

The latest Versions of Virgo provide for direct operation of the Braille display and keyboard.

Open the Virgo menu, select Braille/Braille display (or Braille options/Braille display) and then select ‘VarioConnect’ . From the dropdown list headed “Connection:” select the serial port in current usage (Bluetooth will be addressed as virtual serial port)

Find the latest Information about VIRGO at: www.virgo4.de

5.4.2 Blindows

The latest Version of Blindows supports VarioConnect. Braille Input however is not supported by Blindows. Make sure VarioConnect is set up for the BAUM protocol.

Find the latest information on Blindows at:

www.audiodata.de

5.4.3 JAWS

There is a JAWS driver on the VarioConnect installation CD. The latest version can be downloaded from

www.baum.de

This driver supports both, Braille display and keyboard. Installation instruction are included in the driver package.

5.4.4 Windows Eyes

When this manual was printed, the driver was not ready yet. Please find the latest version of Windows Eyes at:

www.gwmicro.de

5.4.5 Other Screenreaders

When using a screenreader that does neither support VarioConnect nor BAUM provides a driver for, you can set up VarioConnect to use a different protocol. Thus VarioConnect can emulate a Handytech or PowerBraille display and your screenreader will drive it as such. You can choose Handytech, Power Braille 1 and Power Braille 2. As serial port select the one VarioConnect is connected to where USB and Bluetooth are treated as virtual serial ports.

For JAWS there is a spezial driver available.

For Window Eyes there will be a driver available soon. You can use Window Eyes already with VarioConnect in Handytech protocol emulation mode.

The same applies to Supernova and HAL.

6 Help with malfunctions

Minor things can happen which visibly affect the performance of a Braille display but which cannot be called a “real” malfunction. A few examples and hints are described below.

1. **The Braille display shows no characters**.
Check that the device is switched on.
Has a program been launched which is accessing the Braille display’s port?
Was the correct port selected when the screen reader was loaded?

2. **After switching on there is no reaction from the display either when the System Menu is called up or a computer application is launched.**
Battery may be discharged, charge device and try again.
If VarioConnect does not react, turn off and wait 2 minutes before you switch it on again. If the System Menu is still not displayed or the pins flicker quickly, please contact the Service department.

4. **VarioConnect is switched on and the display suddenly stops reacting**.
You have not used the display for longer than the auto-power-off time limit. Turn it on again and move the cursor to update the display.

7 Technical details

7.1 VarioConnect

Mobile 24,32 or 40-cell Braille display with Braille input keyboard for universal connection to mobile phones running Symbian and TALKS or Mobile Speak, PDAs running Windows CE and Mobile Speak Pocket or Pocket HAL (coming soon) or Notebooks running Windows XP Service Pack 2 and screen readers like JAWS, Window Eyes or VIRGO.

Dimensions:
VarioConnect 24: 215 x 86 x 18 mm (WxDxH)
VarioConnect 32: 259 x 86 x 18 mm (WxDxH)
VarioConnect 40: 310 x 86 x 18 mm (WxDxH)

Mass:
VarioConnect 24: 420 g
VarioConnect 32: 500 g
VarioConnect 40: 600 g

Function keys: three keys on both the left and right of the Braille display,
Two function keys on both left and right side on front. Eight Braille Input keys, two ergonomically positioned space buttons, one Joystick. One cursor routing key above each Braille cell.

Ports: USB and Bluetooth wireless connection

Screen Readers: depending on mobile device: TALKS, Mobile Speak, Mobile Speak Pocket, Pocket HAL, VIRGO, Blindows, JAWS, et al.

Power supply: built in rechargeable Lithium Ion battery

Battery life: approx. 30 hours Bluetooth, 100 hours USB.

Charge time: 2.5 hours using charger that comes with the device. (Can also be charges via USB).

Declaration of conformity / compliance
CE – see appendix.

8 Key assignements

Standard assignments for commands and screen navigation, depending on the screen reader program.

8.1 Virgo 4

D1 = Previous element, or upwards
D2 = Braille display scroll left
D3 = Next element, or downwards
D4 = Upwards in hierarchy
D5 = Braille display scroll right
D6 = Downwards in the hierarchy
D1D3D6 = Display attribute with dots 7,8 on/off
D3D5D6 = Cursor with all dots set/underlined
D2D3D6 = Switch between 6/8-dot Braille
D2D5 = Speech on/off
D1D4 = Go to beginning of foreground window
D3D6 = Go to end of foreground window
D1D3D4D6 = Read out current foreground window
D1D2D3 = Continuous reading
D4D5 = Shift navigation to mouse pointer
D5D6 = Shift navigation to focus
D1D2 = Cursor up
D2D3 = Cursor down
D1D3 = Shift-Tabulator
D4D6 = Tab key
D1D2D3D5 = Return
D3D4 = Simulate Alt+F4
D1D3D4 = Minimise all windows
D2D3D4 = Launch Start menu
D1D2D3D4D5 = Quick menu on/off
D1D2D3D6 = Switch Virgo menu on/off
D1D2D4 = Update Virgo files
D1D2D5 = Window-specific Help
D2D3D5 = Display "Program Wizard"
D2D5D6 = De/activate "Screen Wizard"
D1D6 = Navigation to Bookmark No. 1
D1D2D6 = Navigation to Bookmark No. 2
D1D4D6 = Navigation to Bookmark No. 3
D1D4D5D6 = Navigation to Bookmark No. 4
D1D5D6 = Navigation to Bookmark No. 5
D1D2D4D6 = Navigation to Bookmark No. 6
D1D2D4D5D6 = Navigation to Bookmark No. 7
D1D2D5D6 = Navigation to Bookmark No. 8
D2D4D6 = Navigation to Bookmark No. 9

8.2 Other Protocols

When switching to another display protocol the key assignments are coordinated with the currently simulated display type or screen reader.

8.2.1 Handy-Tech (HT)

In the Handy-Tech emulation the keys are assigned as follows:
D1 = HT-key up
D2 = HT-key B1
D3 = HT-key down
D4 = HT-key B2
D5 = HT-key B3
D6 = HT-key B4

8.2.2 Power Braille (PB)

In the PowerBraille emulation the keys are assigned as follows:
D2 = Left PB-key
D5 = Right PB-key
D1 = left rocker up
D3 = left rocker down
D4 = right rocker up
D6 = right rocker down
D2D6 = convex PB-key
D3D5 = concave PB-key

9 Contact details

Baum Retec AG,
In der Au 22
68257 Wiesenbach,
Germany.

Tel. +49 (0) 6223 / 4909 - 0

Email support@baum.de
Website www.baum.de

Subject to alterations
Information supplied without liability
Copyright August 2006 Baum Retec AG

© 2006 Copyright by
BAUM Retec AG
In der Au 22, 69257 Wiesenbach, Germany

All rights reserved. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or information recording and retrieval systems, for any purpose, without the express written permission of Baum Retec AG.